

IMAGES IN CARDIOLOGY

Heart 2005;91:e30 (<http://www.heartjnl.com/cgi/content/full/91/4/e30>). doi: 10.1136/hrt.2004.054957**Anomalous origin of the right coronary artery from the left anterior descending artery**

A 45 year old woman with hypertension presented to the hospital with complaints of exertional chest pain for two days. Her ECG was unremarkable and cardiac biomarkers were within normal limits. During her diagnostic coronary angiogram, multiple attempts to cannulate the right coronary artery (RCA) with the right Judkins catheter were unsuccessful. A non-selective hand-injection of the aortic root failed to opacify the RCA. Subsequently, cannulation of the left coronary artery (LCA) showed a normal course of the left anterior descending artery with no critical lesions and a dominant left circumflex artery. A branch was noted to originate from the proximal segment of the left anterior descending artery distal to the first septal perforator branch and course in the right atrioventricular groove. This was identified as an anomalous RCA (panels A and B).

The overall incidence of coronary artery anomalies in the general population is 1%. Anomalous RCA has an incidence of 0.26% in the general population. Of these, the anomalous RCA may originate from the left sinus of Valsalva (0.1%), posterior sinus of Valsalva (0.003%), LCA (0.009%), thoracic aorta (0.15%), and the pulmonary artery (0.002%). Anomalous origin of RCA from the left anterior descending artery is very rare. Only nine adult cases have been reported in the literature so far. In eight of these, the RCA originated distal to the first septal perforator and in one case it originated from the first septal perforator. This is considered to be a benign anomaly from the limited data available.

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